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# Equipment Specialist Series

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## NOTE

This standard has been converted from the original paper format to electronic format without substantive change in series coverage or grading criteria. The standard was reviewed to correct errors that may have been introduced during the conversion process. In some standards minor corrections were made such as updating references to other documents that may have become obsolete, or correcting minor typographical errors in the original standard. Any errors that remain due to conversion to electronic format should be minor and are not intended to change the meaning of the original standard.

If you find page references near the right hand margin of this standard they indicate the pagination of the official, printed version of this standard. For example, a notation "PAGE 2, 4/88, TS-87" would mean that (1) page two of the printed version begins here, (2) the date of issuance was 4/88, and (3) the Transmittal Sheet number was TS-87.

# Equipment Specialist Series

GS-1670

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## SERIES DEFINITION

This series includes positions that involve supervision or performance of work that requires primarily an intensive, practical knowledge of equipment and its characteristics, properties, and uses in order to (1) collect, analyze, interpret, and provide specialized information about equipment together with related advice to those who design, test, produce, procure, supply, operate, repair, or dispose of equipment; (2) identify and recommend practical solutions to engineering design and manufacturing defects and recommend use of substitute testing or support equipment when the equipment requested is unavailable; or (3) develop, install, inspect, or revise equipment maintenance programs and techniques.

This standard cancels and supersedes the standard for the Equipment Specialist Series, GS-1670, issued in June 1964.

## EXCLUSIONS

1. Classify positions in the [Miscellaneous Administration and Program Series, GS-301](#), when they involve primarily knowledge of types, uses, and costs of engineering and logistics data used in the management of a weapons system or equipment program in order to participate in decisions regarding the identification, selection, acquisition, and control of such data; or knowledge of weapons or equipment systems program development and acquisition and of related configuration management programs and processes, combined with management skills, to establish and maintain the configuration record of items; or to manage contractor development of technical manuals.
2. Classify positions in the [Miscellaneous Clerk and Assistant Series, GS-303](#), when they involve primarily knowledge related to performing clerical and assistant work in support of establishing and maintaining the configuration record of items. These positions consist of a combination of such tasks as assembling, distributing, and controlling documents; reviewing incoming document packages for completeness, proper format, and grammar; scheduling configuration control meetings and physical and functional reviews; assuring all required items are reviewed; and developing status reports.
3. Classify positions in the [Computer Specialist Series, GS-334](#), when they involve primarily knowledge related to designing, modifying, and maintaining systems for solving problems by the use of digital computers. Some equipment specialist positions require considerable knowledge of computer hardware and software. Such positions are classified to the [Equipment Specialist Series, GS-1670](#), when the most important requirement is knowledge related to the operation and use of the equipment in which the computer system is located.
4. Classify positions in the [Logistics Management Series, GS-346](#), when they involve primarily knowledge related to performing work concerned with planning, coordinating, or evaluating

the logistical actions required to support a specified mission, weapons system, or other designated program; and having as its most important requirement the ability to integrate or to understand and analyze the integrated operations of the separate functions.

5. Classify positions in the appropriate professional series of the [Engineering and Architecture Group, GS-800](#), when they involve primarily performing engineering work having as its most important requirement professional engineering or architectural knowledge and ability.
6. Classify positions in the [Engineering Technician Series, GS-802](#), or the [Electronics Technician Series, GS-856](#), as appropriate, when they involve primarily performing nonprofessional work in engineering functions such as design, development, evaluation, testing, or maintenance of equipment. The technician applies a knowledge of engineering theories, processes, and methods for the purpose of making materials, resources, and power useful. For example, the technician might participate in equipment design in order to make the equipment do what it is supposed to do. In contrast, the equipment specialist applies a knowledge of equipment, such as its purpose, functions, and limitations; how it is designed, manufactured, operated, and maintained; or its internal workings and materials. The equipment specialist applies this knowledge primarily to advise on or make decisions that relate to the equipment's use, performance, safety, operation, maintainability, or disposal.

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7. Classify positions in the [Industrial Engineering Technician Series, GS-895](#), when they involve a practical knowledge of the principles and techniques of industrial engineering and of pertinent industrial work processes, facilities, methods, and equipment. Work in the series consists of developing integrated work systems made up of workers, materials, and equipment for use in producing products, rendering services, repairing equipment, or moving and storing supplies and equipment.
8. Classify positions in the [Technical Writing and Editing Series, GS-1083](#), when they involve substantial, but less than full professional or technical subject matter knowledge, combined with writing and editing skills, and the ability to determine the type of presentation best suited to the audience. Equipment specialist positions that involve writing maintenance and repair manuals are primarily concerned with their content and clarity, and work within a prescribed format, while the type of presentation best suited to the audience is determined elsewhere.
9. Classify positions in the [Industrial Specialist Series, GS-1150](#), when they involve primarily a practical knowledge of the nature and operations of an industry or industries, and of the materials, facilities, and methods they employ in producing commodities. Industrial specialists use this knowledge to plan, advise on, regulate, evaluate, or maintain technical surveillance over an industry or industries. Many equipment specialist positions require a knowledge of certain aspects of an industry, e.g., of specific manufacturing processes, and of the types and qualities of items obtainable from different manufacturers. However, the focus of the equipment specialist is not on the industry, as such, but on obtaining information about specific equipment, such as identifying sources for specific items or learning about materials or work processes so as to identify causes of problems in equipment performance.

- 10 Classify positions in the [Production Control Series, GS-1152](#), when they involve primarily planning, estimating, scheduling, and expediting the combined use of labor, machines, and materials in specific manufacturing operations that employ mechanical or automated production systems and methods in the fabrication, overhaul, or repair of Government equipment, facilities, and supplies.
- 11 Classify positions in the appropriate series of the [Education Group, GS-1700](#), when they involve primarily a knowledge of, or skill in, education, training, or instruction processes. Classify training positions to the Equipment Specialist Series, GS-1670, when the most important consideration is knowledge of equipment. For guidance on borderline situations, see further discussion in the [Education Group Coverage Standard, GS-1700](#), and other standards of the Education Group.
- 12 Classify positions in the appropriate series of the [Supply Group, GS-2000](#), when they involve primarily a knowledge of supply systems or operations. Many equipment specialist positions require some supply knowledge. However, an equipment specialist position has as its most important requirement knowledge related to the equipment itself, its maintenance, operational characteristics, properties, etc. For example: A supply specialist may recommend the range and quantity of repair parts and tools necessary to support a component or system of equipment based primarily on historical supply data and information provided in supply catalogs and other reference material regarding interchangeability of items. In contrast, an equipment specialist may make similar recommendations based on such considerations as equipment operational characteristics and material composition, the accessibility of the equipment components for repair, the availability to those who use the equipment of the tools and facilities needed to make repairs, and their capabilities to make repairs.
- 13 Classify to the Federal Wage System all positions having trade, craft, or laboring experience and knowledge as the most important requirement to perform the primary duty of the position. The most important requirement of equipment specialist positions is an intensive, practical knowledge of the uses, properties, and characteristics of equipment. Trade and craft experience often provides this knowledge. However, such knowledge can be gained in other ways. Certain types of engineering and electronics technician experience provide this equipment knowledge, as does technical institute education of an acceptable quality, and related inspection experience. The "Introduction to the Position Classification Standards" provides a fuller discussion regarding coverage under the General Schedule versus the Federal Wage System.

## GLOSSARY OF TERMS

This standard uses terms that may have different meanings in various agencies. The following definitions are included solely for the purpose of applying the criteria in this standard.

**ITEM** - A word used to indicate a piece of equipment where distinguishing between a part, subassembly, etc., is not important to the context;

**PART** - A unit consisting of one or two items of equipment usually not capable of being disassembled without destruction;

**SUBASSEMBLY** - A unit consisting of two or more parts that form a portion of an assembly or component. It is replaceable as a whole and may have parts that are individually replaceable;

**ASSEMBLY** - A unit consisting of several parts and subassemblies joined to perform a specific function; e.g., an electric switch unique to a submarine;

**COMPONENT** - A unit consisting of a combination of parts, subassemblies, and assemblies mounted together that is normally capable of action in a number of situations, e.g., a complete unit such as a pump, motor, governor, or turbine;

**SUBSYSTEM** - A unit consisting of a combination of parts, subassemblies, assemblies, and components connected to perform an operational function, e.g., an airframe, a complete propulsion unit of an aircraft, a motor vehicle drive train, a guidance or propulsion unit of a spacecraft, or a ground support radar system;

**SYSTEM** - A unit consisting of a combination of parts, subassemblies, assemblies, components, and subsystems associated together to form a complete aircraft, missile, machine, motor vehicle, or weapon;

**COMMODITY CLASS** - Items of equipment grouped together for inventory identification because they have similar characteristics, e.g., a group of hydraulic pumps and motors, or a Federal supply class or group of items.

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## **OCCUPATIONAL INFORMATION**

The equipment specialist occupation includes a wide range of work and work settings. The primary distinguishing features are that the nature of the work requires application of an intensive, practical knowledge of equipment and its characteristics, properties, and uses; and that this knowledge is more important in the recruitment and selection process and in performance of the work than other required qualifications. This knowledge about equipment is the type gained from technical training, education, or experience in such functions as repairing, overhauling, maintaining, constructing, or examining equipment. Many equipment specialists apply, in addition, some knowledge of supply and logistics systems operations, capabilities, and limitations related to their assigned equipment, and some familiarity with budget processes.

As an occupation, the Equipment Specialist Series, GS-1670, encompasses the broad equipment stages of preproduction, production, usage, and disposal. Within these stages, equipment specialists perform a wide variety of functions. They obtain, provide, and base recommendations on equipment information such as: manufacturing processes; materials; maintenance requirements; associated equipment and conditions needed to operate and repair it; equipment composition, sometimes down to the smallest part; and how each part interrelates with the other and with adjacent parts, components, or within the larger overall system. They also consider equipment uses; design and operating characteristics and limitations; operating instructions; reliable and unreliable manufacturers; operating and repair capabilities of different organizational levels; and disposal procedures.

### *Preproduction*

Equipment specialists participate in basic concept and feasibility studies, and in the design, development, and testing of new or modified equipment prior to its release for production to assure that every effort is made to achieve such goals as mechanical reliability; reduction in technical skills required to maintain equipment; use of standard parts, tools, and test equipment; use of interchangeable parts and components; accessibility of parts and components for adjustment and repair; reduction in frequency of repair; speed in fault isolation; reduction of repair time; and simplicity and safety of operation. They determine or recommend what spare parts, tools, and operating instructions are required to support equipment during tests, and maintain liaison with agencies and contractors developing the equipment for the purpose of effecting solutions to problems. In performing these functions, they review layouts, engineering and production drawings, specifications and test reports. They compare equipment offered by contractors to specifications contained in bid invitations.

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### *Production*

As the equipment evolves toward the production stage, equipment specialists chair or attend meetings with contractors, suppliers, users, and repairers to develop overall equipment support plans. They advise on standardization of parts, tools, and components, and the extent of their interchangeability. They compute quantitative repair parts requirements for field support, source code them, and define which are to be purchased at a later date. They compile, maintain, and revise allowance lists, provisioning documents, or other designations of tools, parts, and components necessary for the efficient operation and repair of equipment systems and vessels. They determine unit package quantities for efficient and effective distribution to users. They develop or provide the technical data necessary to develop procurement descriptions. They advise and assist in the development of production procedures and techniques where intensive knowledge of the equipment is a consideration; and conduct studies to establish standardized maintenance procedures, shop layouts, and repair operations.

### *Usage*



During field usage, equipment specialists utilize their intensive knowledge of the particular equipment involved in reevaluating previously selected repair parts and tools to reduce unnecessary or unexpected duplication and variety. They investigate reports of abnormal consumption of material and recommend corrective measures; and prepare, revise, or review purchase description standards or specifications that form a part of commercial contracts for repair work or new procurement. They review, analyze, and evaluate deficiency and failure reports; recommend equipment modifications; and request and evaluate laboratory tests and trial installation of modified equipment. They consider significance of failures in regard to safety hazards, cost of repair, loss or down-time of equipment resulting from such deficiencies as lack of available parts and distribution facilities. They prepare changes updating or revising technical manuals, maintenance service letters, technical bulletins, and a variety of supplementary documents such as supply catalogs. They identify, interchange, substitute, and cannibalize parts and components. They review equipment performance against standards and rated capacity and maintenance history; provide on-site maintenance assistance on newly developed or issued equipment; investigate unprecedented major equipment deficiencies; and provide assistance to suppliers, users, and repairers.

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### *Disposal*

Equipment specialists participate in declaring items that are no longer economically repairable as excess to the system and recommend their disposal. Using their intensive knowledge of the equipment concerned, they are often required to develop commercial descriptions suggesting alternate commercial uses of equipment and, in some instances, recommend equipment modifications to facilitate commercial use. On high value items offered for sale, equipment specialists may be called upon to decide whether the bid offered is reasonable and acceptable, or too low.

The work performed in the preproduction, production, usage, and disposal phase within the equipment specialist occupation apply to modified as well as new equipment. Major conversion programs include many problems similar to those presented by the introduction of a new item, component, or system.

## **TITLES**

### *Authorized Titles*

*Equipment Specialist* is the title for all nonsupervisory positions in this series. *Supervisory Equipment Specialist* is the title for all positions that meet the criteria for coverage in the ["General Schedule Supervisory Guide."](#)

### *Specializations*

Agencies may use parenthetical titles in accordance with guidance in the ["Introduction to the Position Classification Standards."](#) We recommend avoiding specializations that are too broad or

too narrow. In most cases, use of the parenthetical *general* will be more appropriate than use of three or more specializations together, as a specialization should be used only where a substantial depth of knowledge is required. Also, it would not be appropriate to define a specialization in terms of a specific product, such as (aircraft, C-5). Usually, the required skills and knowledges can be applied to a range of products, such as designated by the specialization (aircraft propulsion). The following is a list of official parenthetical titles:

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Aerospace - Aerospace systems and subsystems, including related ground support, launch, and aerospace vehicles; primary components; and integrated equipment in the areas of fluid and flight mechanics, propulsion and power, and materials and structures;

Aircraft - All types of fixed and rotary wing aircraft;

Aircraft Propulsion - Aircraft engines, their components, and accessories; and aircraft engine work support, storage, and shipping equipment;

Airframe - Aircraft structures such as wings, fuselage, fuel tanks, controls, aerial targets; and certain miscellaneous airframe equipment, e.g., fire extinguishers, fire detection and oxygen equipment, anti-icing equipment, crew comfort equipment, specialized ground support equipment; and related equipment;

Automotive - Automotive equipment and components such as cars, trucks, tanks, and buses; and special purpose vehicles including fire engines and amphibious, track, or crawler vehicles; and parts and accessories such as engines and their parts, brakes, clutches, axles, radiators, transmissions, and frames;

Chemical - Chemical equipment such as alarms, masks, testing and detection kits, detectors and monitors, breathing apparatuses, decontaminating apparatuses, collective protection equipment, gas particulate filter units, smoke pots, smoke generators, and other miscellaneous chemical equipment.

Electrical - Electrical machinery, equipment, and instruments, such as motors, generators, transformers, switches, and controls; including those for motor vehicles, aircraft, and locomotives;

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Electronic - Electronic equipment and instruments, such as radio and television equipment; radar; sonar; electronic fire control apparatus; electrical and magnetic field detection apparatus; light and heat emission detection apparatus; electronic systems, parts, and components; navigational and missile guidance equipment; search, test, diagnostic and telemetric equipment; and controlling software;

Machinery - Machinery, other than electrical, such as engines or turbines powered by steam, water, or internal combustion, except aircraft and automotive engines; agricultural, construction, and mining machinery; metal working machinery, other than machine tools, for forging, bending,

or pressing metal without the use of tools; special and general industrial machinery including pumps and air and gas compressors; mechanical power transmission equipment; industrial furnaces and ovens; and related valves, fittings, and bearings;

Machine Tools - power driven machine tools that shape metal and gears by grinding, cutting, drilling, sawing, etc.; machine tool spare parts, accessories, and attachments including precision measuring tools and gages; and controlling software;

Marine - Hulls and hull equipment of ships, boats, barges, floating bridges, and similar craft; marine machinery and propulsion equipment including boilers, heat exchangers, hull piping, propellers, shafting, reciprocating engines, turbines, reduction gears, pumps, compressors, pipes, valves, and various auxiliary equipment; and special-purpose equipment peculiar to marine operations;

Missiles - Guided and ballistic missiles; the assembled structural and aerodynamic equipment of the missile; missile launchers, platforms, and staging equipment; and related special tools, materials, testing, and other equipment;

Missile Mechanical - All missile mechanical equipment and Federal supply classes such as pneumatic and hydraulic that are part of or associated with the complete weapons system, including the missile shelters, portable and stationary launchers, erectors, pads, silos, and wells;

Missile Propulsion - All parts, assemblies, subassemblies, components, subsystems, and associated equipment that serve to develop thrust;

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Ordnance - Mechanical ordnance and accessories; ammunition; azimuth and elevation mechanisms and motors; sighting and range finding equipment (excluding optical lenses, prisms, and electronic devices); field and deck guns, torpedoes, machine guns, and mortars; all small arms and parts; mine dispensing equipment; nuclear weapons and associated test and handling equipment; and miscellaneous ordnance and accessories;

Precision Instruments - Any of a wide variety of electronic, electrical, radiological, mechanical, and optical laboratory; scientific, engineering, medical, photographic, surgical, and dental instruments, their timing devices and parts, and related controlling software;

Ships - Ships and their equipment (positions concerned primarily with a specific kind of ship equipment, e.g., marine, electronic, or electrical, are classified to the specialization appropriate for that type of equipment);

General - Equipment not covered by a specific specialization, and equipment combinations that include items described in more than two of the above definitions where no one or two groups of

items is controlling. Positions that involve working primarily with equipment defined in one or two of the above specializations and, in addition, some incidental work with miscellaneous equipment should be titled on the basis of the primary equipment knowledges and skills required. A requirement for knowledges of diverse kinds of equipment may indicate that relatively little knowledge of the actual equipment is required, and classification to another series might be appropriate.

## EVALUATING POSITIONS

Evaluate positions using the factor level descriptions and assigned point values in this standard. Use the Primary Standard and related FES standards to assist in evaluating positions that may warrant higher or lower factor levels than those described. See "The Classifiers Handbook" and the "Introduction to the Position Classification Standards" for more information.

Apply the "General Schedule Supervisory Guide" to positions that meet the criteria for coverage by the guide.

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## GRADE CONVERSION TABLE

Total points on all evaluation factors are converted to GS grade as follows:

GS Grade	Point Range
9	1855-2100
10	2105-2350
11	2355-2750
12	2755-3150

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## FACTOR LEVEL DESCRIPTIONS

### FACTOR 1, KNOWLEDGE REQUIRED BY THE POSITION

#### *Level 1-6 -- 950 Points*

Knowledge of equipment and of the established methods, procedures, and techniques of an administrative program, including applicable underlying principles and theoretical and practical limitations, and skill to perform independently projects that include limiting features such as the following --

- the objectives are specific and well defined, and problems can be solved by varying slightly from established methods, procedures, and precedents;
- the problem is straightforward and has been singled out of a larger investigation or project; unknown factors and relationships are mostly factual in nature; and
- the mechanisms involved are fairly well understood.

*Illustrations:*

- Participates in assuring the operational readiness of an extensive vehicle fleet at an installation in the areas of major maintenance, operational maintenance, services, and related administrative and supply management policies and procedures. The equipment includes commercial and complex specialized-use wheeled vehicles. Monitors reports, identifies problem areas, and develops and gives training courses targeted to specific needs. Develops and publishes notices and instructions.
- Performs a variety of activities related to engine inlet fans and other types of equipment for specific types of aircraft, in support of an agency technical manager whose assignment involves complex subsystems of assigned aircraft propulsion systems. Receives and analyzes deficiency reports. Determines extent of overhaul, repair, or modification appropriate and develops supporting cost/benefit data. Obtains engineering concurrence. Presents recommendations to the local configuration control board. Assigns criticality and complexity symbols to equipment on purchase requests. Drafts instructions and step-by-step procedures for operation, maintenance, and modification of assigned equipment. Visits field activities and contractor facilities to verify technical manuals, and to secure and provide advice on equipment operation, modification, maintenance, and repair.
- Writes and revises technical manuals for agencywide use, and provides technical advice concerning parts, materials, and manufacturing, repair, and maintenance processes and procedures. Assignment chiefly concerns all subsystems and components of a common helicopter type. Written products provide step-by-step instructions on how to maintain and repair subsystems and components. Reviews such information as engineering drawings, military standards, manufacturers specifications, and current manuals and shop process standards. Observes actual repair and maintenance. Participates with shop personnel in working out the most efficient processes and procedures. Decides what to have illustrated and what parts of the procedures to emphasize for clarity. Drafts instructions. Chairs the group that validates these instructions. Submits them to engineering for final approval. Researches documents, interprets drawings, contacts manufacturers to learn the processes, materials, and parts they are using, and advises the local shops on causes of problems and the solutions. Recommends corrections and substitutions for items on provisioning lists.

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- Develops technical procurement packages including quality assurance, test, and inspection requirements. Reviews technical data, drawings, and specifications to determine and establish sources of manufacture; analyzes and evaluates minor deviations in technical requirements; develops technical changes to procurement specifications; evaluates engineering change proposals; and determines alternate supply methods (e.g., cannibalization, fabrication, and in-house manufacture). Processes item discrepancies and advises other specialists of any required actions. Provides technical information to customers, maintains equipment information in a data base, and maintains an accurate configuration baseline for equipment managed.

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*Level 1-7 -- 1250 Points*

Knowledge of a wide range of concepts, principles, and practices in the occupation, or those concepts and principles characterized as requiring extended specialized training and experience, and skill in applying this knowledge to difficult and complex assignments such as planning and conducting work that requires significant judgment in evaluating, selecting, and adapting precedents and modifying procedures and criteria.

*Illustrations:*

- Technically manages complex subsystem(s) or broad specialized types of Automatic Test Equipment (ATE) for a worldwide military organization. The ATE is used to test a missile, aircraft, or other weapons systems, including its software and related support equipment. Develops the maintenance concept, including forecasting usage rates and establishing initial repair and replacement factors. Determines the technical data required. Recommends or evaluates required operational capabilities. Interprets and explains operation and maintenance requirements and procedures. Recommends practical design modifications. Controls proposed maintenance and engineering changes and presents them to the appropriate review board. Evaluates appropriateness of combining individual corrective action with other pending actions and makes necessary changes to total subsystem maintenance policies and procedures. Monitors and coordinates resolution of all maintenance and engineering problems as well as all modifications within assigned area. Represents the organization by chairing and technically participating in reviews and conferences.
- Provides technical equipment advice, recommendations, and decisions for a nationwide agency with extensive locations or a worldwide organization on all varieties of electronic maintenance and repair parts, assemblies, components, and subsystems relating to an older aircraft type. Reviews proposed purchases to assure they meet current configuration requirements. Certifies approved sources. Decides upon, imposes, and revises inspection requirements based on the specialist's judgment as to the degree of manufacturing difficulty, manufacturer's reliability, degree of urgency, and the item's criticality and safety requirements. Determines and assigns initial criticality codes when item is put into the supply system.

Examines and evaluates the material and functional characteristics of completed items and assigns fail rates to components and subsystems (e.g., location of electronic components close to heat sources shortens useful life) as part of initial baseline procurement data. Provides equipment information to resolve numerous problems.

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- Defines test sequence and pass/fail parameters used in computer programs built into new automatic testing equipment (ATE) designed to test gas turbine engines. Advises the ATE operators how to resolve unusual troubleshooting problems. Develops standard operating procedures and training plans related to operating ATE equipment for use by the local activity.

## **FACTOR 2, SUPERVISORY CONTROLS**

### *Level 2-3 -- 275 Points*

The supervisor makes assignments in terms of complete projects or portions of larger projects, and provides overall objectives, priorities, deadlines, any necessary background, and suggestions on potential difficulties. The supervisor gives general instructions on new policies, regulations, and procedures, and assists the specialist with controversial or especially difficult situations or those that lack clear precedents.

The equipment specialist plans and carries out the successive steps and exercises initiative in obtaining and analyzing data and identifying, resolving, or alerting supervisor to potential problems. The specialist handles problems and deviations in the assignment in accordance with instructions, policies, previous training, or accepted practices.

The supervisor reviews completed work for technical adequacy, conformance with objectives, and compatibility with other work. The supervisor reviews work in process and upon completion when it leads to recommendations affecting policy, such as requiring changes in maintenance procedures.

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### *Level 2-4 -- 450 Points*

The supervisor assigns continuing areas of responsibility and sets the overall objectives and resources available. Except for externally imposed deadlines such as those in contracts, the specialist and supervisor, in consultation, develop the deadlines, projects, and work to be done.

The equipment specialist plans and carries out the work, resolves most of the conflicts that arise, coordinates the work with others, and interprets policy on own initiative in terms of established objectives. The employee keeps the supervisor informed of progress and potentially controversial matters.

The supervisor reviews completed work only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

### **FACTOR 3, GUIDELINES**

#### *Level 3-3 -- 275 Points*

The equipment specialist uses a variety of standard, detailed guidelines and references, such as agency instructions, policies and regulations, technical publications, manufacturers' catalogs and handbooks, and supply databases. These are not completely applicable to the work or have gaps in specificity.

The specialist uses judgment to interpret and adapt the guides for application to specific problems, to analyze results, and to recommend changes.

#### *Level 3-4 -- 450 Points*

The equipment specialist uses a wide range of technical material such as manuals, bulletins, textbooks, and manufacturers' catalogs. In addition, the specialist uses guidelines such as agency regulations and policy statements whose contents are frequently quite broad and general in nature. These provide only general guidance as to the most productive approach or methods to solve the most highly complex or unusual problems in the work.

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The specialist uses initiative and resourcefulness to deviate from or extend traditional methods or to research trends in order to develop new criteria or new policy proposals.



## FACTOR 4, COMPLEXITY

### *Level 4-3 -- 150 Points*

The equipment specialist performs assignments consisting of various tasks or duties involving different and unrelated processes and methods.

For example, some equipment specialists are detailed to various organizations to study design, production, logistics, or maintenance procedures related to their equipment specialization. Over time, they work with all categories of equipment within their specializations, and perform all phases of such assignments.

Other equipment specialists normally work with parts and subassemblies. In doing so, they perform such tasks as researching documents or examining the items in order to identify, describe, and issue them when the information on requisitions is missing or incomplete, and they frequently recommend modifications to items they suggest as a substitute for unavailable requisitioned items. They collect and evaluate all information submitted by operating organizations related to one type of malfunction in, e.g., a subassembly, and recommend changes such as the substitution of a weld for a connecting pin to correct these malfunctions. Occasionally, they work with components such as transmissions and hydraulic pumps to perform relatively uncomplicated tasks, e.g., identifying and describing these items for reference purposes, or recommending their repair or disposal based primarily on visual examination of their characteristics and conditions.

The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives.

The work involves conditions and elements that must be identified and analyzed to discern interrelationships.

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### *Level 4-4 -- 225 Points*

The equipment specialist performs assignments requiring application of many different and unrelated processes and methods such as those relating to well established aspects of broad equipment stages, for example, preproduction and production, or usage and disposal.

For example, some equipment specialists exercise continuing responsibility for broad categories of equipment such as commodity classes or subassemblies throughout the life of the equipment. Through conferences, meetings, reports, and training, these employees provide the technical advice, assistance, and specialized equipment knowledge necessary to support their assigned categories of equipment from the time they are introduced into the logistical system until they are retired through sale, scrap, or donation.

Other equipment specialists exercise continuing responsibilities through the preproduction and production stages. They work with several different contractors who are supplying the major components of a new or extensively modified weapons system. They chair various provisioning conferences to determine the quality and quantity of repair parts and tools required to support the components during field usage; establish delivery dates and priorities within the framework of overall weapons system logistical deadlines; and assure that the contractors provide equipment that conforms to specification requirements established for the weapons system.

Other equipment specialists have continuing responsibility for providing technical support during the usage stage for assigned categories of equipment. They investigate representative material deficiency reports and take broad corrective action. They develop the plans required to design, produce, and issue one new standardized component to correct most or all of the individual equipment deficiencies with one broad program. In addition to recommending the new design, the specialist evaluates the specifications; examines the mockups and prototypes; provides the contractor, procurement, and supply specialists with technical descriptive and performance data; develops maintenance policies and procedures; and recommends disposal of the items replaced.

Still other equipment specialists make extended visits to field installations or organizations maintaining or using their assigned categories of equipment to provide several different kinds of services in each visit, such as: (a) evaluate those aspects of maintenance shop management and operations that require equipment knowledge; (b) solve operational, maintenance, or repair problems; (c) recommend the redesign of faulty equipment and tools or the substitution of materials; and (d) conduct training courses in the use, repair, and maintenance of equipment.

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Decisions regarding what needs to be done include the assessment of unusual circumstances, variations in approach, and incomplete or conflicting data.

The work requires making many decisions concerning such things as planning the work and interpreting considerable data.

#### *Level 4-5 -- 325 Points*

The equipment specialist performs varied duties requiring many different and unrelated processes and methods applied to a broad range of activities such as to groups of commodity classes; several equipment subsystems; or total weapon, aircraft, tracked, or wheeled vehicle systems.

For example, some specialists serve on a continuing basis as an agency representative and spokesperson on the technical panels and committees that develop general plans and procedures for broad equipment activities and programs, e.g., the introduction of a new weapon system into the agency's logistical support program. Other equipment specialists serve at a major contractor's plant with the commitment authority to make design and provisioning decisions that materially

affect the readiness or capability of a total aircraft, weapon, or vehicle system that is distributed worldwide.

Still other equipment specialists manage and coordinate, through conferences, meetings, correspondence, etc., the work of a number of Government and private organizations engaged in a variety of functional activities such as design, procurement, and stock control. They provide and control the technical data necessary to establish deadlines, phase programs in and out, etc., and provide the management leadership required to assure agency or departmentwide logistical support for assigned equipment, such as one or more total weapons systems.

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Deciding what needs to be done involves major areas of uncertainty in approach, methodology, or interpretation and evaluation processes resulting from such elements as continuing changes in program, technological developments, or conflicting requirements.

The work requires originating new techniques, establishing criteria, or developing new information.

## **FACTOR 5, SCOPE AND EFFECT**

### *Level 5-3 -- 150 Points*

The purpose of the work is to treat a variety of conventional problems, questions, or situations in conformance with established criteria. For example, the equipment specialist identifies needed areas of emphasis and develops and presents training to activities in a wide variety of motor vehicle service operations for a variety of types of motor vehicles; or investigates common types of equipment performance or maintenance problems, identifies the causes, and develops and recommends solutions.

The work product or service affects the design or operation of systems, programs, or equipment, the adequacy of testing operations, or the physical well being of persons. In some work situations, the service affects the capability of employees to perform their mission.

### *Level 5-4 -- 225 Points*

The purpose of the work is to establish criteria, formulate projects, assess program effectiveness, or investigate or analyze a variety of unusual conditions or problems. For example, the equipment specialist speaks for the agency on technical panels and committees that develop general plans and procedures for the introduction of a new weapon system into the agency's logistical support program; or makes design or provisioning decisions that materially affect the readiness or capability of a total aircraft, weapon, or vehicle system that is distributed worldwide.

The work product or service affects the work of other experts in this or related occupations, or the development or accomplishment of major aspects of a weapon systems program or agency mission.

## **FACTOR 6, PERSONAL CONTACTS AND FACTOR 7, PURPOSE OF CONTACTS**

Match the level of the employee's personal contacts with the directly related purpose for those contacts and credit the appropriate point value from the chart below.

*The Persons Contacted are:*

1. Civilian or military employees within the immediate organization, office, project, or work unit, and in related or support units.
2. Civilian or military employees in the same agency, but outside of the immediate organization and related or support units.
3. Civilian or military individuals or groups from outside the employing agency such as supply, procurement, logistics, budget, machine shop, equipment specialist, or engineering personnel employed by contractors, other agencies, or foreign governments. This level also includes contacts with program officials within the employing agency but several managerial levels removed from the employee when such contacts occur on a nonroutine basis.

*The Purpose of Contacts is:*

- a. To plan or coordinate work efforts, or to advise on or solve technical problems.
- b. To persuade individuals or groups with different opinions or interests, e.g., to change criteria or methods, accept findings, or gain information such as during on-site appraisals or inspections.
- c. To negotiate, justify, or resolve significant or controversial matters, such as those that substantially influence the ability to maintain, repair, or deliver equipment of a major acquisition program. In this example, the equipment specialist would lead a special study project or interagency working group to achieve a common understanding of the causes of complex problems in the ability to maintain, repair, or deliver equipment, and to develop solutions or suitable alternatives.

## P U R P O S E

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	b	c	d
1	60	130*	230*
2	75	145	245
3	110	180	280

\*These combinations are probably unrealistic.

**FACTOR 8, PHYSICAL DEMANDS***Level 8-1 -- 5 points*

The work is sedentary and requires no special physical abilities. It may involve some walking, standing, bending, or carrying of light items.

*Level 8-2 -- 20 points*

The work requires some physical exertion such as long periods of standing; or recurring activities such as bending, crouching, stooping, stretching, or reaching; or recurring lifting of moderately heavy objects such as boxes of project files.

*Level 8-3 -- 50 points*

The work requires considerable strenuous physical exertion such as frequent climbing of tall ladders, lifting of objects over 22.5 kilograms (50 pounds), or crouching or crawling in limited space.

**FACTOR 9, WORK ENVIRONMENT***Level 9-1 -- 5 points*

The work involves everyday risks and discomforts typically associated with office, training room, or similar settings. Work areas are adequately heated, lighted, and ventilated. Visits to production areas are infrequent and relatively free of hazards to the employee

*Level 9-2 -- 20 points*

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The work involves regular and recurring exposure to moderate risks and discomforts associated with production areas, such as exposure to strong odors or fumes from paint, fuels, or chemicals used in work processes; working near operating machinery, moving vehicles, and cranes; working in dry docks, on and around scaffolding, close to high noise levels from engine test facilities, and near a variety of types of electrical hazards. The work situation requires the specialist to be continually alert and to take special safety precautions, including wearing special protective items of clothing.